

Listing of Claims:

Claim 1 (Cancelled)

Claim 2 (Withdrawn) Polypeptide with an amino acid sequence that is shown in Seq ID No. 2.

Claim 3 (Withdrawn) Use of human PEM or a nucleic acid that codes for this as a target substance for the production of an agent for birth control.

Claim 4 (Withdrawn) Use of human PEM or a nucleic acid that codes for this as a target substance for the production of an agent for treating Alzheimer's disease.

Claim 5 (Withdrawn) Use according to claim 3, wherein the human PEM is coded by (a) the coding area of the nucleic acid sequence that is shown in SEQ ID No. 1, (b) one of the sequences according to (a) against the backdrop of the degeneration of the genetic code and/or (c) a nucleic acid sequence that hybridizes under stringent conditions with the sequences according to (a) and/or (b).

Claim 6 (Withdrawn) Use according to claim 3, wherein the human PEM has the amino acid sequence that is shown in SEQ ID No. 2 or an amino acid sequence that is at least 80% identical to it.

Claim 7 (Withddrawn) Use according to claim 3, wherein an inhibition of PEM is used to reduce the fertility.

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Claim 8 (Withdrawn) Use according to claim 3, wherein an activation of PEM is used to increase fertility.

Claim 9 (Withdrawn) Process for identifying agents for birth control, wherein the ability of test substances to modulate PEM is determined.

Claim 10 (Withdrawn) Use according to claim 4, wherein an inhibition of PEM is used for treating Alzheimer's disease.

Claim 11 (Withdrawn) Process for identifying agents for treating Alzheimer's disease, wherein the ability of test substances to inhibit PEM is determined.

Claim 12 (Withdrawn) Process according to claim 9, wherein the formulation of the test substances that have a modulatory or inhibitory action or compounds derived therefrom into a pharmaceutical agent.

Claim 13 (Withdrawn) Process for fertility diagnosis, wherein the expression and/or functionality of human PEM is determined in a sample.

Claim 14 (Cancelled)

Claim 15 (Withdrawn) Human cell, wherein it contains a defective PEM gene in at least one allele.

Claim 16 (Withdrawn) Process for identifying genes that are regulated by the human PEM gene, wherein the effect of human PEM on the gene expression in human cells is tested.

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Claim 17 (Withdrawn) Process according to claim 16, wherein a transcript analysis or proteome analysis is performed.

Claim 18 (New) An isolated polynucleotide for a human PEM, comprising:

- (a) a polynucleotide sequence continuously coding for a polypeptide having the amino acid sequence set forth in SEQ ID NO:2;
- (b) a polynucleotide sequence as set forth in SEQ ID NO:1;
- (c) a polynucleotide sequence that hybridizes under stringent conditions to the polynucleotide sequence set forth in SEQ ID NO:1, and which continuously codes for a polypeptide, wherein said hybridization conditions comprises a wash for one hour in a solution comprising 1X SSC and 0.1% SDS at 62°C; or
complements thereto.

Claim 19 (New) An isolated polynucleotide of claim 18, which comprises a polynucleotide sequence as set forth in SEQ ID NO:1, or a complement thereto.

Claim 20 (New) An isolated polynucleotide of claim 18, which comprises a polynucleotide sequence continuously coding for a polypeptide having the amino acid sequence set forth in SEQ ID NO:2, or a complement thereto.

Claim 21 (New) An isolated polynucleotide for a human PEM, comprising

- (a) a polynucleotide sequence continuously coding for a polypeptide having the amino acid sequence set forth in SEQ ID NO:2, or a fragment thereof which is specific for human PEM;

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(b) a polynucleotide sequence as set forth in SEQ ID NO:1. or a fragment thereof which is specific for human PEM; or
complements thereto.

Claim 22 (New) An isolated polynucleotide of claim 21, wherein said fragment comprises SEQ ID NO: 4 and the complement of SEQ ID NO:5.

Claim 23 (New) A transformed host cell that comprises at least one exogenous copy of a polynucleotide of claim 18.

Claim 24 (New) A transformed host cell that comprises at least one exogenous copy of a polynucleotide of claim 21.